EXHIBIT 1

FILED UNDER SEAL

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
SHERMAN DIVISION**

The State of Texas, et al.,
 	
           Plaintiffs,
 	
v.
 	
Google LLC,
 	
           Defendants.
	Case No. 4:20-cv-00957-SDJ
	
	Hon. Sean D. Jordan

PLAINTIFFS' FIRST NOTICE OF RULE 30(b)(6) DEPOSITION

PLEASE TAKE NOTICE that, pursuant to the Federal Rules of Civil Procedure, the applicable Local Rules of the United States District Court for the Eastern District of Texas, and the rules and orders of this Court, Plaintiffs the State of Texas, State of Arkansas, State of Idaho, State of Indiana, Commonwealth of Kentucky, State of Mississippi, State of Missouri, State of North Dakota, State of South Dakota, State of Utah, State of Alaska, State of Florida, State of Nevada, Commonwealth of Puerto Rico, State of Montana, State of Louisiana, and State of South Carolina (collectively "the States") request to take the deposition of Defendant Google LLC ("Google") pursuant to Fed. R. Civ. P. 30(b)(6).

Pursuant to Rule 30(b)(6), Defendants are directed to designate one or more officers, directors, managing agents, or other persons to testify on their behalf who have the knowledge reasonably available to it on the matters set forth in Exhibit A, attached hereto.

Defendants are requested, at least ten (10) days prior to the deposition: (a) to provide a written designation of the persons who will testify on behalf of Defendants as to the categories in Exhibit A, as well as a written designation regarding each category in Exhibit A to which each designated person(s) will testify, (b) to produce, pursuant to Rules 30(b)(2) and 34 of the Federal

Rules of Civil Procedure, any and all documents and things relating to each of the categories listed in Exhibit A to the extent they have not been previously produced in the case, and (c) identify all documents reviewed or considered in preparation for the deposition by Bates number.

The deposition may be taken in-person or by remote means such as Lexitas LegalView or Veritext Virtual. The deposition will be taken upon oral examination before a court reporter, notary public, or other person authorized by the laws of the United States to administer oaths and will be recorded using stenographic, audiographic, and/or videographic means. Such deposition will take place beginning at 9:00 am CT on March 5, 2024 at Norton Rose Fulbright's Houston Office located at 1301 McKinney, Suite 5100, Houston, Texas 77010, or at such other date, time, and/or location as agreed to, and continuing day to day, excluding Saturdays, Sundays, and holidays unless otherwise agreed to by the parties, until completed. Google's Source Code produced in this Action should be made available by remote access or other mutually agreed means during the deposition. Further, the deponent should have remote access to Google's infrastructure, systems and servers as needed to follow Google links and pull up documents in the deposition as needed.

Consistent with Judge Jordan's and Special Master Moran's statements at the February 15, 2024 and February 8, 2024 hearings, respectfully, Google should expedite all topics related to records and documents. *See, e.g.*, Transcript of February 15, 2024 Status Conference at 22:11-28:2. Accordingly, the States request Google immediately schedule depositions for witnesses on Deposition Topics 1-20; and then turn to the remaining topics without delay.

Dated: <u>February 21, 2024</u>

<u>/s/ W. Mark Lanier</u>
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*Submitted on behalf of all Plaintiff
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CERTIFICATE OF SERVICE

I hereby certify that on this day a true and correct copy of the foregoing document was

served on all counsel who are deemed to have consented to electronic service by electronic mail.

Dated: <u>February 21, 2024</u>

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By: <u>*/s/ Zeke DeRose III*</u>
Zeke DeRose III

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EXHIBIT A[1]

GENERAL DISCOVERY/CUSTODIAN/LOCATION OF DOCUMENTS TOPICS

1. Your activities, practices, and policies related to your discovery obligations, and document preservation, retention, collection, searches, and productions of relevant and responsive Documents, in this case.

2. All activities undertaken to meet Your document-related discovery obligations in this Action, including a summary of Google's ingestion sites and how they were searched, an identification of each person contacted in searching for responsive documents, an identification of all Google personnel that searched for documents responsive to the States' discovery requests, the Date(s) each search was performed, and the identity and location of all document repositories searched, including without limitation:

    a.   centralized and non-centralized servers or networks;

    b.   shared drives;

    c.   email servers;

    d.   hard copy files;

    e.   engineer, developer, researcher, consultant and employee desktop and/or laptop computers;

    f.   databases containing electronically stored information relating to the Google Ad Tech Products and/or Ad Tech Auction Mechanics that the States' and/or Google identified and/or searched in responding to the States' discovery requests; and

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[1]The headers in this notice and subpoena are <u>solely</u> for convenience of parties' counsel and do not expand or limit in any way the scope of the topics as written. Moreover, as many topics could properly be placed under several different headers, the selection of one for convenience is not limiting.

g.   all steps that Google has taken to obtain consent from any Third-Party Publisher, Third-Party Advertiser, or Third-Party Exchange to produce in this Action such Documents or materials, including but not limited to Source Code, dashboards, and/or data.

3.   Your information storage, organization, and retention practices and policies, including without limitation the management of technical documents and third-party documents and Your systems and policies for accounting, record keeping, and document retention for purposes of this Action.

4.   All steps Google has taken to preserve Documents, Source Code, dashboards, and data relating to this Action and/or the Google Ad Tech Products and Ad Tech Auction Mechanics, including but not limited to:

a.   all steps taken in accordance with Google's document retention policy as administered during the normal course of business;

b.   all steps taken that differ from Google's document retention policy as administered during the ordinary course of business; and

c.   all Google personnel involved in the preservation of Documents relating to this Action and/or responsive to any discovery the States' have served on Google in this Action.

d.   A discussion of the Documents that were not preserved by type, custodian and category.

5.   The location, identity, and file and/or storage formats of all Documents, including but not limited to all electronically stored information and hard copy of documentation, relating to the Google Ad Tech Products and Ad Tech Auction Mechanics.

6.   The nomenclature or terms that Google uses to refer to the Google Ad Tech Products and Ad Tech Auction Mechanics relevant to this case, including but not limited to:

      a.   the sales, marketing, finance, engineering, and/or Google departmental names or identifications for each Google Ad Tech Product and Ad Tech Auction Mechanic;

      b.   the marketing, engineering, design, and/or Google departmental names used in the development process for each Google Ad Tech Product and Ad Tech Auction Mechanic;

      c.   the code names and identifiers for each Google Ad Tech Auction Mechanic;

      d.   the identity and location of all Documents describing the nomenclature that refers to the Google Ad Tech Auction Mechanics; and

      e.   the file and/or storage formats for all such Documents.

7. The design and development process, employee or contractor onboarding process, and the identity of the persons, entities, and groups responsible for each Google Ad Tech Auction Mechanic.

8. The process by which any of your employees or contractors are educated or otherwise "onboarded" regarding each Google Ad Tech Auction Mechanic, including the resources used to provide such education, such as primers, instruction manuals, wikis, technical documents, presentations, tutorials, and videos, and any Documents and/or repositories used or referenced as part of this process.

9. The technical documentation (either internal or external) for each of Your Ad Tech Products and Ad Tech Auction Mechanics, including, but not limited to technical reference manuals, specifications, schematics, configuration guides, user manuals, APIs, instruction manuals, product roadmaps, product architecture schematics, training materials, sign-off guides, technology documents, integration guides, Markdown files, and information repositories, including websites, related to each Google Ad Tech Auction Mechanic.

10. The reports and/or analysis You generate for each of Your Ad Tech Products and Ad Tech Auction Mechanics, including reports generated based on logged data, the cadence of any such report or analysis generation, the audience for each such report or analysis, and the person(s) responsible for or involved in generating such report or analysis.

11. The design and development process for each Google Ad Tech Auction Mechanic, including milestones such as conception, research, design, development, testing, experiments, first roll-out and staged roll-out (whether live or in experiment), and use at full scale, and including the location and approximate time for each stage, and identification of each Ad Tech Product to which each Ad Tech Mechanic applied and Documents relating to this Topic.

12. The identity of the Person, individual, entity, party, and/or company who is responsible for the engineering, design, development, and/or creation of each Google Ad Tech Auction Mechanic, including Source Code, dashboards, and/or data incorporated in or used with each Google Ad Tech Auction Mechanic and including Documents regarding same.

13. The dashboards created and maintained by Google related to Your Ad Tech Products and any Ad Tech Auction Mechanic, including any documentation regarding the use and/or operation of such dashboards, the field and values that can be selected for each dashboard, and the date range of data aggregated or otherwise available to be viewed or processed by each dashboard.

14. The Documents, Source Code, dashboards, and data supplied, or otherwise made available, by or to Google, related to Your Ad Tech Products or the structure, architecture, function, operation, integration, implementation and/or result of each Google Ad Tech Auction Mechanic, including each winning bid, losing bid, number of bidders, identity of bidders and publishers, publisher-supplied floors, adjusted floors, timing of bids, amount of any bid adjustments made by Google's buying tools, the historical values of Bernanke multipliers alpha and beta, formulae of

surplus maximizing functions, the Ad Exchange, the Ad Network, the amount paid by the winning

bidder, the amount paid to the publisher, the amount kept or charged by Google, and/or Google

manipulation or influence in any auction.

15. Documents, including Source Code, dashboards, data, and internal and external Documents

and Communications, relating to each Google Ad Tech Auction Mechanic.

16. Your use of links in Documents, including but not limited to the use of go/ (or goto/) links,

and the tools and database(s) you use to store, maintain, and search go/ links and to translate go/

links into underlying URLs.

17. The organization of the Source Code Computer, and the location on the Source Code

Computer of all Source Code and data pertaining to each Google Ad Tech Auction Mechanic.

18. The preservation, retention, collection, searches, productions, policies, procedures, and

practices related to Google chats (including but not limited to chats sent and received via instant

messaging, Google Chat, Google Hangout, Slack, and Chat) that are relevant and responsive in

this case, including the use of chats as related to Google's Ad Tech business.

19. Google chats (including but not limited to chats sent and received via instant messaging,

Google Chat, Google Hangout, Slack, and Chat) and use of chats as related to Google's Ad Tech

business and/or the topics in this notice, Google's policies, procedures, and practices for chats, the

different forms and types of chats, Google's monitoring and retention of the same—both generally

and as related to this litigation—its chat retention policies (including the current policy), any

changes to that policy since 2013, the difference in "history on" and "history off" chats and the

circumstances, procedures, practices, and policies related to each, including but not limited to:

    a.   whether, when, and in what circumstances Google suspended its 24-hour auto-

         delete policy for chat messages for chat messages related to this litigation and/or other

ongoing or reasonably anticipated litigations and/or investigations including but not limited to sworn statements and testimony by Google representatives on these topics;

b.   the extent to which any document custodian in this case conducted chats with the default "history off" setting enabled, including:

  i.each employee subject to a litigation hold that may have conducted or did conduct "history off" chats regarding matters potentially relevant to this Investigation or Litigation, and the extent to which they did so; and

  ii.any direction or statements that Google provided to its employees about conducting chats with the "history off" or "off the record;"

c.   Google's efforts, if any, to monitor or audit whether document custodians in this case turned their chat history "on" when discussing matters potentially relevant to this litigation;

d.   whether Google automatically deleted chat messages between employees including CEO Sundar Pichai; and

e.   the identity and overall numbers of Google employees who did not change their chat's auto-delete setting even after they were made aware of their legal obligation to preserve evidence.

20. Documents, including representations, statements, communications, presentations, posts or postings, marketing, promotions, advertising, updates, instructions, or recommendations regarding each Ad Tech Product and/or Ad Tech Auction Mechanic provided to Publishers, Advertisers, customers, Users, and/or third parties, and internal discussions regarding whether, to what extent, and with whom You should disclose or externally discuss Your Ad Tech Auction Mechanic and the effects thereof.

HIGH LEVEL TECH SPECIFIC TOPICS

21. The lifecycle of an ad impression within Your Ad Tech Products, including through each Ad Tech Auction Mechanic.

22. The integration between Google Ad Tech Products and any third-party system, including the ease of such integration and the data sharing and flow of data between Your Ad Tech Products and such systems.

23. For each Google Ad Tech Product and Ad Tech Auction Mechanic, the structure, architecture, function, operation, integration, and implementation and associated Documents, Source Code, dashboards, and data.

24. Your decision to implement and reasons for implementing or declining to implement each Ad Tech Auction Mechanic, including for all versions of each Ad Tech Auction Mechanic including Google's decision to exempt certain buyers from various Ad Tech Auction Mechanics. By way of example, this would include discussions related to exempting GDN from DRS and Google's RPO exemption policy.

25. The conception, research, design, and development process for each of the Google Ad Tech Products and Ad Tech Auction Mechanics, including without limitation:

    a.   timelines and pertinent dates for such processes;

    b.   identification of all individuals involved in each part of the process;

    c.   identification of all entities involved in each part of the process;

    d.   address of all entities involved in each part of the process;

    e.   documents used during, created during, or describing the conception, research, design, and/or development process, such as bill of materials, schematics, Source Code, software/application design documents, software/application architecture documents,

technical specifications, logs, manuals, presentations, architecture diagrams, product

requirement documents, data flow diagrams, programming guides, API references,

protocol descriptions, interfaces, declarations, design specifications, experiments,

quantitative analyses, launch reports, progress reports, status reports, onboarding materials,

and/or training material.

26. Google's evaluation, testing, experimentation, analyses, predictions, designs, simulations,

query results, data maps, data descriptions, data dictionaries, and prototyping of each Google Ad

Tech Product and Ad Tech Auction Mechanic.

27. Any redesigns for any Google Ad Tech Product or Ad Tech Auction Mechanic, including

the modification, cost, expected monetary impact of change, return on investment ("ROI"), and

time period to complete for any changes or product redesign, and Documents relating to this Topic.

28. Whether and to what extent You currently use or implement any Ad Tech Auction

Mechanic; if not, when you stopped implementing the Ad Tech Auction Mechanic and Your

reasons for doing so; and Your plans to implement any Ad Tech Auction Mechanic in the future,

including revised or modified versions of that Ad Tech Auction Mechanic.

29. Identification of all persons who performed work on the Ad Tech Products and/or Ad Tech

Auction Mechanics.

30. Identification of the person(s) most knowledgeable regarding the Ad Tech Products and/or

Ad Tech Auction Mechanics.

31. The similarities and differences between Ad Tech Auction Mechanics (and any variants,

predecessors, and successors thereof), as well as the interaction among Your Ad Tech Auction

Mechanics and how programs or features of Your Ad Tech Auction Mechanics operated in

conjunction with or relation to one another.

32. The Ad Tech data and information that Google makes available to its Advertisers and Publishers, including any differences in the data and information provided to specific Advertisers and Publishers, and the mechanisms and tools that Google uses to make such data available.

33. Buy side attribution and data sharing You make available through the Ads Data Hub ("AD") as that term is used by Google.

34. For any auction in which Google participates, any information that is available to Google that Google does not make available to Advertisers or Publishers and Google's reasons for not providing such information to Advertisers or Publishers.

35. The location and address of all facilities owned or operated by You anywhere in the United States and the activities at each such location related to the Ad Tech Products or Ad Tech Auction Mechanics.

36. Your decision to deprecate third-party cookies in Chrome and/or Android, implement FLEDGE ("First Locally-Executed Decision over Groups Experiment"), the Privacy Sandbox, and/or Protected Audience API, and the consequences and effects thereof, including any analysis of the impact of such deprecation and implementation, including but not limited to the impact on Publisher revenues and the DSP market.

COMMUNICATIONS, REPRESENTATIONS, AND PURPORTED OMISSIONS

37. The content of, and changes or updates to (actual or proposed), Your Help Center from 2014 to the present, including related blog posts or articles You released in conjunction with updates to Your Help Center.

38. The contracts related to Your Ad Tech Product offerings, including changes to those contracts (actual or proposed).

39. All marketing, advertising, commercialization, public-facing statements, and promotion related to each of the Ad Tech Products and/or Ad Tech Auction Mechanics, including without limitation external presentations, internal presentations, customer documentation, sales brochures, promotional materials, trade show packets, sale forecasts, customer acquisition strategies, competitor analyses, Internet websites, Help Center updates, blog posts, articles, and social media postings, including any internal discussions regarding whether, to what extent, and with whom You should disclose or externally discuss such Ad Tech Products and/or Ad Tech Auction Mechanics.

40. Statements, claims, or representations You made or considered making to any Publisher concerning Your duty, ability, or intent to increase or maximize the Publisher's revenues or yields, and internal discussions regarding whether, to what extent, and with whom You should disclose or externally discuss Your duty, ability, or intent to increase or maximize the Publisher's revenues or yields, and the effects thereof.

41. Statements, claims, or representations You made or considered making to any Publisher or Advertiser concerning revenue shares, fees, margins, take-rates, or costs related to transactions on Your exchanges, and internal discussions regarding whether, to what extent, and with whom You should disclose or externally discuss revenue shares, fees, margins, take-rates, or costs related to transactions on Your exchanges, and the effects thereof.

42. Statements, claims, or representations You made or considered making to any Advertiser concerning Your duty, ability, or intent to decrease or minimize the Advertiser's costs or the price of advertisements, and internal discussions regarding whether, to what extent, and with whom You should disclose or externally discuss such duty, ability, or intent, and the effects thereof.

43. Google's external representations and public-facing statements You made or considered making regarding each Ad Tech Product and/or Ad Tech Auction Mechanic to Publishers, Advertisers, and other third-parties, including any such representations or statements related to whether Publishers, Advertisers, and other-third parties would be opted into any version of an Ad Tech Auction Mechanic and/or whether being opted into that Ad Tech Auction Mechanic would also opt a Publisher out of another Ad Tech Auction Mechanic (or version of an Ad Tech Auction Mechanic), and internal discussions regarding whether, to what extent, and with whom You should disclose or externally discuss Your Ad Tech Auction Mechanic(s), and the effects thereof.

44. Whether and to what extent You disclosed the accumulation or retention of funds under any Ad Tech Auction Mechanic into "pools," "bank accounts," or accumulated "debts" or "credits" and the use of such "pools," "bank accounts," or accumulated "debts" or "credits" on future bids.

45. The number and identity of Publishers and Advertisers to which You disclosed each Ad Tech Auction Mechanic, in full or in part, and the specific disclosures made to each such Publisher and Advertiser.

46. Your internal discussions, communications documents, "talking points," marketing materials, and related internal trainings related to each Ad Tech Product and Ad Tech Auction Mechanic, including Your development thereof and internal communications related thereto, and including Google's understanding of the effects, benefits, and drawbacks of each Ad Tech Auction Mechanic on Publishers, Advertisers, Google, and the broader "ecosystem" as the term is used by Google in its documents; the transparency, fairness, and truthfulness of any auction type or Ad Tech Auction Mechanic; Your decision whether or not (and if so, when) to disclose the Ad Tech

Auction Mechanic to Publishers, Advertisers, and third-parties, and Your reasoning or rationale regarding such decisions.

47. Google's internal discussions regarding each Ad Tech Auction Mechanic, including Google's understanding of the effects of the Ad Tech Auction Mechanic on Publishers, Advertisers, Google, and the broader "ecosystem"; Your decision whether or not (and if so, when) to disclose the Ad Tech Auction Mechanic to Publishers, Advertisers, and third-parties, the extent of such disclosure, and Your reasoning or rationale regarding such decisions.

48. Your external representations and disclosures related to Your fees, margins, revenue share, and/or take rates in Your Ad Auctions, and internal discussions regarding whether, to what extent, and with whom You should disclose or externally discuss such fees, margins, revenue share, and/or take rates in Your Ad Auctions, and the effects thereof.

49. The types of auctions (*e.g.*, first price auctions, second price auctions, shadow auctions, first look auctions, and modified or hybrid second price auctions) that Google ran for display advertising from 2010 to the present, Your representations to and communications with third parties and internal communications regarding the same, and any internal discussions regarding whether, to what extent, and with whom You should disclose or externally discuss such auctions, and the effects thereof.

50. Statements or communications (internal or external) regarding the benefits or drawbacks of any auction types, including the transparency, fairness, and truthfulness of any auction type, the benefits and drawbacks of second price auctions and alternative auction models, Your reasons for switching from an alleged second price auction, including to a first price auction in or around 2019, and internal discussions regarding whether, to what extent, and with whom You should disclose or externally discuss such benefits and drawbacks, and the effects thereof.

51. Your representations to third-parties and any public statements, including but not limited to representations or statements in Your Help Center, Your websites, blog posts, or articles, regarding the type(s) of auction(s) AdX ran from 2010 to the present, including but not limited to any representations or public-facing statements that AdX ran a sealed bid and/or second-price auction prior to switching to a first-price auction in or around 2019, and internal discussions regarding whether, to what extent, and with whom you should disclose or externally discuss such representations, and the effects thereof.

52. Your representations to third-parties and any public statements made regarding the fairness or transparency of Your Ad Auctions and whether auction participants were on "equal footing," and internal discussions regarding whether, to what extent, and with whom you should disclose or externally discuss such representations and/or statements, and the effects of that disclosure or non-disclosure.

53. Whether and to what extent Google contends that AdX ran a second price auction prior to switching to a first-price auction in or around 2019.

54. Your internal communications and discussions regarding whether AdX ran a second price auction prior to 2019.

55. Complaints, concerns, or questions by any Publisher, Advertiser, or other third-party relating to the fairness, transparency of, or bias in Your Ad Auctions, and Your responses thereto, including relating to whether AdX ran a second-price auction prior to 2019.

56. Whether You ran live experiments on auction participants, whether you notified the auction participants of these experiments and how they were notified, and if liev experiments were run, the type, scope and description of the experiments run, the percentage of traffic or "slices" on

which they were run, and the identity of the participants on which they were run as well as Google's conclusions regarding the results of those experiments

57. Non-privileged communications relating to this Action, including any advice or opinion that You received pertaining to Plaintiff's claims, and defenses on the Ad Tech Products and/or Ad Tech Auction Mechanics.

58. To the extent not covered by other Topics in this Notice, Your responses to discovery requests in this case, including responses to interrogatories and requests for production.

59. To the extent not covered by other Topics in this Notice, Your responses to interrogatories in this case.

60. To the extent not covered by other Topics in this Notice, Your responses to requests for production in this case.

61. To the extent not covered by other Topics in this Notice, the contents of Documents you produced in this Action.

62. The identity and location of all persons, documents, and things consulted, reviewed, communicated with, or relied on in preparation for testifying about each of the topics in this notice.

63. The factual bases for Your contentions, if any, that Your conduct(s) relating to or associated with the Ad Tech Products and/or Ad Tech Auction Mechanics do not violate the federal and state laws that underlie the claims in this case.

64. The factual basis for Your contentions, if any, that the Ad Tech Products, and/or Your conduct(s) relating to or associated with the Ad Tech Products and/or Ad Tech Auction Mechanics do not violate the Sections I and II of the Sherman Act, 15 U.S.C. §§ 1, 2 and the Texas Deceptive Trade Practices-Consumer Protection Act, Tex. Bus. & Com. Code Ann. §17.41 et seq.

65. Any of Your defenses, whether or not formally raised in this Action, including all factual bases therefore, and the identity of all documents bearing on, supporting, or refuting each such defense.

DFP-AdX TYING CLAIMS

66. Google's acquisition of DoubleClick and any exclusive access or rights afforded to AdX after and as a result of that acquisition.

67. The timing of Awbid's development and integration.

68. The market share of DFP or any Google ad server over time

69. Publishers' ability to access AdX demand through a non-DFP (or other Google) ad server and Google's consideration of or refusal to integrate AdX with third-party or publisher in-house ad servers.

70. Google's monitoring and tracking of other entities in the ad server market, including but not limited to OpenRamp, Facebook's Atlas, Facebook's LiveRail, ValueClick, Verizon's Oath, and Sizmek.

71. Google's contracts and communications with publishers regarding, and the number of publishers with contracts related to, GAM or any pairing of Google ad exchange (AdX) and ad server (DFP) services.

72. Google's contracts and communications with publishers regarding, and the number of publishers with contracts related to Yavin as that term is used by Google.

73. Google's contracts and communications with publishers regarding, and the number of publishers with contracts related to, AdX Direct.

AD TECH ECONOMICS & IMPACT

74. Your business plans, strategic plans, financial plans, marketing plans, forecasts, analyses, estimates, or reports related to the Ad Tech Products and/or Ad Tech Auction Mechanics.

75. Google's accounting policies and procedures related to the Ad Tech Auction Products and Ad Tech Auction Mechanics, including how Google calculates profits, revenue, fees, and margins including but not limited to DFP, AdX, Google Ads, and DV360.

76. Google's profits, revenue, fees (broken down by pricing tier), and margins for its Ad Tech Products, including but not limited to:

    a.   DFP from 2007 to present broken down by region including North America and the United States as well as all for all Plaintiff States.

    b.   AdX from 2007 to present broken down by region including North America and the United States as well as all for all Plaintiff States.

    c.   Google Ads from 2007 to present broken down by region including North America and the United States as well as all for all Plaintiff States.

DV360 from 2016 to present broken down by region including North America and the United States as well as all for all Plaintiff States.

77. Google's market share in the display advertising and ad server industry, including all studies or analysis that Google has conducted to calculate that market share. Including but not limited to:

    a.   Actual or projected market shares for DFP's web display advertising and its competitors from 2007 to the present in terms of breadth, penetration, volume of impressions, gross revenue transaction, and number of customers and/or any other metrics used by Google in its regular course of business (including breakdowns by transaction type,

e.g. Open Auction), broken down by region including North America and the United States as well as all for all Plaintiff States.

b.   Actual or projected market shares for AdX's web display advertising and its competitors from 2007 to the present in terms of volume of impressions, gross revenue transacted, and/or any other metrics used by Google in its regular course of business (including breakdowns by transaction type, e.g. Open Auction), broken down by region including North America and the United States as well as all for all Plaintiff States.

c.   Actual or projected market shares for Google Ads' web display advertising and its competitors from 2007 to the present volume of impressions, gross revenue transacted, and/or any other metrics used by Google in its regular course of business (including breakdowns by transaction type, e.g. Open Auction), broken down by region including North America and the United States as well as all for all Plaintiff States.

d.   Actual or projected market shares for DV360's web display advertising and its competitors from 2016 to the present volume of impressions, gross revenue transacted, and/or any other metrics used by Google in its regular course of business (including breakdowns by transaction type, e.g. Open Auction), broken down by region including North America and the United States as well as all for all Plaintiff States.

e.   A summary of the competitive landscape – including what competitors are considered, product offerings (*e.g.* SWOT analysis), pricing, and fees, when Google measures market shares for DFP, AdX, Google Ads, and DV360

78. The impact, effect, benefit, or harm of each Ad Tech Auction Mechanic alone or in combination on Publishers, Advertisers, Google, and Your competitors, including any such analysis conducted or generated by You or on Your behalf, the individuals involved in performing

such analysis, the tools used to perform such analysis, any reports generated detailing such analysis, and Your communications regarding the same.

79. The effects of each Ad Tech Auction Mechanic on AdX exchange floors, on bids from Google Ads, on Google's fees, revenue share, margins, and take-rates, and on second bids on non-competitive queries.

80. The effects of each Ad Tech Auction Mechanic on AdX exchange floors.

81. Your use of historical bidding information in connection with any Ad Tech Auction Mechanic.

82. The effects of each Ad Tech Auction Mechanic on bids from Google Ads.

83. The effects of each Ad Tech Auction Mechanic on Google's fees, revenue share, margins, and take-rates.

84. The effects of each Ad Tech Auction Mechanic on second bids on non-competitive queries.

85. How You determined the percent or amount of Your margins or take-rates in Your auctions from 2010 to the present.

86. The percent of advertising revenue paid by Advertisers that Publishers receive when selling inventory through Your exchange or network.

87. The fees that You charge in connection with your Ad Tech business, and whether such fees were disclosed to auction participants.

88. Any experiments, tests, analyses, predictions, simulations, query results, data maps, data descriptions, data dictionaries, for GAM, DFP, and AdX.

89. Your decision to allow AdX to outbid non-Google Ad Exchanges after they submitted their bids, as well as Your decision to discontinue this conduct, if such a decision was made.

90. Your decision to charge a fee to Ad Exchanges who participated in Open Bidding or Exchange Bidding.

91. The manner in which DFP, AdX, GAM, Non-Google Publisher Ad Servers, Non-Google SSPs, non-Google Ad Exchanges, AdSense, DV360, Google Marketing Platform (formerly DoubleClick Digital Marketing and Google Analytics 360 Suite), and Google Chrome interact and/or exchange data or otherwise communicate with each other.

92. Any advantages to You or Your Ad Tech Products arising from Your access to or use or accumulation of information relating to past bidding behavior of bidders on an Ad Auction You conduct, including Exchange Bidding and Open Bidding and including any documentation related to the availability of bid-related information for Publishers, Advertisers, and Ad Exchanges at each stage of the auction and Advertisers' valuation of Ad Impressions.

93. The monetary and non-monetary advantages to You or Your Ad Tech Products arising from Your access to or use or accumulation of Behavioral Data as well aswhat representations were made to Publishers, Advertisers and Ad Exchanges about Behavioral Data and whether the underlying users consented to that Behavioral Data's use in an Ad Exchange.

94. Any experiment, analysis, or simulation You conducted or are aware of related to the impact of any Ad Tech Auction Mechanic on Publishers or Advertisers and the results thereof, including but not limited to any impact on Your exchange fees and Publisher revenues or yields.

95. The design, development, analysis, evaluation, or study of any dashboard (also referred to as "dash") related to an Ad Tech Auction Mechanism, including all distinct iterations of such dashboards.

96. The terms of contracts, agreements, or arrangements that Google has with Publisher, Advertisers, agencies, or any other third-parties regarding any of the Ad Tech Products or any Ad Tech Auction Mechanic including Your interpretation such contracts..

97. Any analysis conducted by or for You in connection with having Meta/Facebook use Open Bidding, including analysis of the minimum spend commitment needed to deter Meta/Facebook from using Header Bidding in a significant way, as well as any concerns You had or expressed (internally or externally) regarding Facebook potentially partnering with Amazon to use Header Bidding.

DYNAMIC REVENUE SHARE ("DRS")

98. Dynamic Revenue Share ("DRS"), including, but not limited to:

   a.   whether Google currently uses any revenue sharing programs or features, including where and how such revenue programs or features are used, and if not, whether Google currently has plans to implement any revenue sharing programs or features;

   b.   any revenue sharing program or feature that dynamically adjusted margins, revenue share, take rates or the fees Google charged Publishers to transact via AdX;

   c.   the effects of each Ad Tech Auction Mechanic on Your exchange fee, margin, revenue share, or take rate including but not limited to the time at which an Ad Tech Auction Mechanic adjusted Your exchange fee, revenue share, margin, or take rate in relation to the time at which bids were solicited;

   d.   Your decision to opt Publishers into DRS v1 or any predecessor thereof and whether and to what extent You opted Publishers into DRS v1 or any predecessor thereof and whether and how, if at all, Google disclosed to Publishers their enrollment therein;

e.   the ability of a Publisher to opt out of DRS v1 (or any predecessor) and Your

communications internally and externally relating to the same;

f.   the number and identity of all Publishers who were opted into the first version of

DRS (or any version or iteration of DRS prior to DRS v2) when it was initially

implemented;

g.   the number of transactions and impressions transacted on and the number and

identify of every Publisher transacting on AdX on a monthly basis from January 1, 2012

to the present in which the implementation or operation of DRS resulted in exchange fees

for publisher inventory, or Your take rates, margins, or revenue shares, that were higher

than they otherwise would have been had DRS not been implemented or in operation;

h.   the impact of DRS on Your Metrics, Publishers' and/or Advertisers' Metrics, and

Your competitors' Metrics.

i.   Contracts related to DRS including Your interpretation such contracts.

BERNANKE

99. Bernanke, including, but limited to:

a.   the amount of revenue or margin captured by the pricing differential created by

Bernanke or dynamic sell-side revenue share (DRS), as well as the number of AdX auctions

in which the amount paid by the Advertiser and/or the amount received by the Publisher

was altered as a result of Your implementation of Bernanke or DRS, the difference between

the amounts Publishers received from auctions conducted under each version of Bernanke

or DRS, and the amounts Publishers would have received had Bernanke or DRS not been

implemented, and the difference between the amounts Advertisers paid for impressions

sold in auctions conducted under each version of Bernanke and the amounts Advertisers would have paid had Project Bernanke not been implemented;

b.   the formulae and data used to the Bernanke multipliers alpha and beta;

c.   the values (including historical values) of Bernanke multipliers alpha and beta;

d.   the formulae of the surplus maximizing functions used in connection with Bernanke;

e.   how You use or have used revenue You collected through Bernanke;

f.   Bernanke's effects on Google Ads buyers' win rates, including whether Google Ads buyers won more transactions on average than non-Google Ads buyers under Bernanke;

g.   the accumulation or retention of funds under Bernanke or DRS into "pools," "bank accounts," or accumulated "debts" or "credits" and the use and effects of such "pools," "bank accounts" or accumulated "debts" or "credits" on future bids;

h.   the number of transactions on AdX where Bernanke, or any version thereof, was operational or in effect and a Publisher was paid based off the third highest bid when Google Ads submitted the top two bids in AdX;

i.   the amount or portion of the second price You retained under Bernanke when Google Ads submitted the top two bids in AdX, on a monthly basis from January 1, 2012 to the present;

j.   the impact of Bernanke on Your Metrics, Publishers' and/or Advertisers' Metrics, and Your competitors' Metrics.

k.   Contracts related to Bernake including Your interpretation such contracts.

UNIFIED PRICING RULES ("UPR")

100.   Unified (or Uniform) Pricing Rules ("UPR"), including, but not limited to:

a.   publisher use of per-buyer (*e.g.*, per-Ad Exchange or per-ad buying tool) price floors, including using price floors to increase revenue and improve quality of advertisements;

b.   attempts by any Publisher, SSP, or Publisher ad network to circumvent GAM's [Unified/Uniform] Pricing Rules, and all exceptions to or accommodations or variations of [Unified/Uniform] Pricing Rules requested by Publishers and Your decision whether to approve or reject such requests;

c.   internal tests, experiments, simulations, or studies, which measure, forecast, predict, study, or research the impact that Your decision to move to a Unified Auction or adopt [Unified/Uniform] Pricing Rules would have or has had on the adoption of Header Bidding;

d.   the number of impressions (as an absolute number and as a percentage of the total number of impressions available in the Unified Auction) that Google Ads or DV360 won slightly above the floor price (where "slightly above" shall mean that the difference between the price that Google Ads or DV360 paid and the floor price or next highest bid does not exceed $0.10 CPM);

e.   the impact of UPR separate from the move to the first price auction on Your Metrics, Publishers' and/or Advertisers' Metrics, and Your competitors' Metrics.

RESERVE PRICE OPTIMIZATION ("RPO")

101.   Reserve Price Optimization ("RPO"), including, but not limited to:

a.   Your contracts with Publishers, including revisions, changes, or amendments thereto, related to Publishers' exchange floors and any alterations or changes thereto, as well as any related internal and external communications, including those related to Your interpretation such contracts;

b.   the number and identity of all Publishers whose exchange floors were affected, altered, changed, manipulated or overridden as a result of RPO from January 1, 2013 to the present;

c.   the number of transactions on AdX on a monthly basis from January 1, 2013 to the present, in which an Advertiser paid more for an ad/impression than they otherwise would have if RPO had not been operational or in effect;

d.   the identity of all Advertisers who, from January 1, 2013 to the present, paid more for an ad/impression than they otherwise would have if RPO had not been operational or in effect;

e.   Your use of historical bidding information in connection with RPO, including whether and to what extent You informed Advertisers that RPO used Advertisers' historical bidding information;

f.   Your internal discussions regarding RPO, including Your understanding of the effects of RPO on Publishers, Advertisers, and Google, and Your decision whether or not to disclose RPO to Publishers, Advertisers, and third-parties;

g.   Your internal and external communications related to the amount and type of inventory that would be available on AdX as a result of RPO;

h.   Your decision to initially implement RPO without disclosing the program to Publishers and/or Advertisers and the reasons therefore;

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i.   the number and identity of all Publishers who were opted into RPO when it was initially launched or implemented, including the extent to which Google disclosed RPO to Publishers;

j.   Your decision to externally represent RPO as "optimized pricing" rather than "reserve price optimization," internal and external communications related to such decision, and the reasons therefore;

k.   Your public-facing statements and internal communications related to RPO or "optimized pricing", including but not limited to the March 5, 2015 Digiday article "Google sweetens deal for publishers with dynamic price floors," including any internal discussions regarding whether, to what extent, and with whom You should make such statements regarding RPO, and the effects thereof.

l.   the impact of RPO on Your Metrics, Publishers' and/or Advertisers' Metrics, and Your competitors' Metrics.

DYNAMIC ALLOCATION/ENHANCED DYNAMIC ALLOCATION

102.   Dynamic Allocation ("DA") and Enhanced Dynamic Allocation ("EDA"), including, but not limited to:

a.   the design, development, and operation, including when AdX receives the impression and waterfall process, of each version of DA and EDA;

b.   how EDA differs from DA;

c.   the impact and/or effect of EDA on non-AdX Exchanges, on the share of Ad Inventory sold by Publishers through Direct Sales, on the timing of Ad Inventory sold by Publishers through Direct Sales, on the value of Publishers' inventory sold through Direct

Sales, on allocation of Advertisers' ad spend between Direct Sales and programmatic sales, and/or on the loss to Publishers of the opportunity to gain additional ad spend absent EDA;

d.   how you rank or ranked Ad Exchanges or Ad Networks with DA or EDA enabled (and how that compares or compared to how Publishers rank or prioritize Ad Exchanges or Ad Networks);

e.   DA's effects on Publisher revenue and CPMs bid for Ad Inventory, whether DA is an improvement over "waterfalling" or "daisy chaining," and whether it reduces Publisher risk that ad inventory would not sell;

f.   how You determined the reserve price and/or the "Temporary CPM" and/or the "Value CPM" in auctions using EDA and how Real Time Bidding ("RTB") works in the context of EDA;

g.   EDA's impact on advertiser use of AdX or GDN;

h.   the impact of DA on Your Metrics, Publishers' and/or Advertisers' Metrics, and Your competitors' Metrics;

i.   the impact of EDA on Your Metrics, Publishers' and/or Advertisers' Metrics, and Your competitors' Metrics.

POIROT & ELMO

103.   Project Poirot and Project Elmo, including, but not limited to:

a.   the design, development, and operation of each version of Project Poirot and Project Elmo;

b.   how Poirot and Elmo were used to identify which Ad Exchanges were likely participating in Header Bidding;

c.   how DV360 adjusted bids for impressions under Poirot or Elmo;

d.   the impact of Poirot and Elmo on wine rates of AdX, match rate, or revenue share (and the amount of any such impact in each calendar quarter);

e.   the impact of Poirot and Elmo on Your Metrics, Publishers' and/or Advertisers' Metrics, and Your competitors' Metrics.

HEADER BIDDING

104.   Header Bidding, including, but not limited to:

a.   the monthly share of impressions and revenue served by DFP or transacted through AdX, as well as the monthly share of impressions transacted by and revenue for any other Publisher Ad Server, Ad Exchange, or Ad Network or through Header Bidding;

b.   Your decision not to support the option for Publishers to use Header Bidding in GAM, DFP, or Open Bidding, and to prohibit AdX or GAM from returning bids through Header Bidding;

c.   any changes you made to Your Ad Tech Products in connection with or that had an effect on header bidding, including line item caps, any data redactions, or failure to share data (including, but not limited to min_bid_to_win data);

d.   any features limiting the visibility of publishers into header bidding performance/insights, including but not limited to the Ads Intelligence Hub feature;

e.   Your internal operations groups, employee groups, investigative teams, or task forces which have studied or examined (or are studying or examining) the effects of Header Bidding on any aspect of Google's business, including the establishment, operation of, and conclusions drawn by Google's Header Bidding Observatory Team and competitive threats to Your Ad Tech Products posed by Header Bidding;

f.   Header Bidding's impact on winning prices paid by Advertisers and/or received by

Publishers for impressions and take rates charged by ad exchanges;

g.   latency studies performed by You, at your request, or otherwise in Your possession

with respect to Header Bidding;

h.   Your response to Header Bidding, including all Documents concerning Your policy

and practice of implementing Open Bidding;

i.   any analysis of the flow of queries running through Header Bidding as compared

to Open Bidding;

j.   the impact of Open Bidding on the win rates of AdX, the win rate of Header Bidding

winners in Open Bidding or against AdX, and the volume of inventory sold through Header

Bidding solutions;

k.   contracts between You and any third-party Ad Exchange, SSP, or Publisher that

contains any provision that requires such entity to make Ad Inventory available through

Open Bidding if it also sells that inventory through Header Bidding;

l.   the potential or actual impact of Dynamic Allocation on Publisher revenues,

including comparing revenues from Dynamic Allocation versus Header Bidding;

m.   Your Decision to introduce a new type of Bid Data Transfer file that contains

bidding data from Authorized Buyers and Open Bidding but does not contain impression-

level data or Header Bidding data;

n.   efforts undertaken, policies implemented, or buying strategies implemented by You

to avoid buying Ad Inventory through Header Bidding auctions;

o.   the impact that Your decision to move to a Unified Auction or adopt

[Unified/Uniform] Pricing Rules would have or has had on the adoption of Header Bidding;

p.   Your use or imposition of timeout restrictions on Bid Requests concerning ads served on AMP Pages when the inventory being served was sold through a Header Bidding solution or through any competing Ad Exchange;

q.   the impact of Header Bidding on Your Metrics, Publishers' and/or Advertisers' Metrics, and Your competitors' Metrics.

SOURCE CODE

105.   The Source Code and Algorithms (including any pseudo-code) used by Your Ad Tech Products and/or Ad Tech Auction Mechanics, including targeting and bidding algorithms for Google Ads and DV360, as well as the code used to design and implement all Core Algorithm Updates released on or around (a) September 24, 2019, (b) June 3, 2019, (c) March 12, 2018, and (d) November 5, 2017.

106.   The database configuration (including schemas, procedures, functions, and triggers) for all databases: (a) used to store data relating to Ad Requests and their corresponding bids to display ads on web pages; and (b) accessed during the process of responding to an Ad Request, including databases containing Behavioral Data concerning the viewer of a web page.

107.   How Your Ad Tech Products and Ad Tech Auction Mechanics use, modify, reflect, or determine the following data as inputs to Your Source Code and Algorithms, including:

a.   The number of bidders in sales and auctions;

b.   The timing of all bids and in sales and auctions;

c.   The sequencing and partitioning of all sales and auctions, involving any participants, concerning the same Ad Impression;

d.   The amount, characteristics, and consideration given for each bid submitted by any

participant (*e.g.*, timeliness of submission, identity of submitting participant, positioning

of bid within line items in ad server, and rejection or failure to consider bid);

e.   The information/signals from AdX to Google buyer tools;

f.   The information/signals from AdX to 3rd party buyer tools;

g.   The amount of the winning offer or bid;

h.   The amount of the price setting offer or bid (*e.g.*, the second-highest bid in a

"second-price auction," the floor price if only one bid exceeded the floor, or the highest

bid in a "first-price auction");

i.   The floor price(s) for the Ad Impression;

j.   The identity of (i) the winning bidder and (ii) the Ad Exchange, Ad Network, or

other source of the bid;

k.   The amount submitted and paid by the winning bidder and/or by the Ad Exchange,

Ad Network, or other source of the offer or bid;

l.   Any modifications by You of the amount to be paid to Publishers such that You

retained a portion of the winning bidder's payment that differed in any way from the

agreed-upon rate or amount;

m.   The amount You retained as payment (or "take") for each service rendered or tool

provided by You at each stage of the transaction;

n.   The amount You charged the Advertiser in connection with each Ad Impression.

DEFINITIONS

1.   "Action" shall mean Case No. 4:20-cv-00957-SDJ and *In re: Google Digital Advertising Antitrust Litigation*, 1:21-md-03010-PKC.

2.   "Ad Auction" shall mean any auction to sell Ad Inventory.

3.   "Ad Impression" shall mean a specific advertising opportunity in a specific ad space on a Publisher's website that can be sold to an Advertiser.

4.   "Ad Inventory" shall mean the range of potential Ad Impressions a Publisher has available to sell on its webpages when Users load the webpages.

5.   "Ad Request" shall mean an electronic message sent from a Publisher's web page to a Publisher Ad Server, requesting the Publisher Ad Server prepare Bid Requests soliciting advertising content from SSPs, Ad Exchanges, or Ad Networks for insertion or incorporation into a web page. An Ad Request may be directed to a portion or the entirety of a web page.

6.   "Ad Tech Auction Mechanic(s)" shall mean any and all systems and software that implement, effectuate, or modify any Ad Auction rules, preferences, designs, or features; this term includes any and all versions or iterations of Open Bidding (also known as "Exchange Bidding," "Jedi," "Jedi+," "Jedi++," or "Demand Syndication"), Open Auction, Dynamic Allocation, Enhanced Dynamic Allocation, Optimized Competition, Real-Time Bidding, OpenRTB, Unified Pricing Rules, Uniform (or Unified) Pricing Rules, First Look, Last Look, Reserve Price Optimization, Dynamic Revenue Share (including "Average Revenue Share"), Project Bernanke (including Bell and Global Bernanke), Project Poirot, Project Elmo, or Minimum Bid to Win, and all predecessors and successors thereto.

7.   "Ad Tech Products" shall mean any and all systems, platforms, and software, including predecessors and successors, used in the process of identifying, selecting, transmitting, and/or

rendering Digital Advertising on a desktop or mobile device, as well as all systems and software, including predecessors and successors, that implement and/or effectuate an Ad Auction, including receiving, processing, and transmitting Bid Requests, Bid Responses, or related messages. The term includes Publisher Ad Servers, Advertiser Ad Servers, SSPs, DSPs, Demand-Side Products, Ad Exchanges, and Ad Networks, and specifically includes Your products: Your Publisher Ad Server (formerly called "DoubleClick for Publishers" or "DFP"); Your Ad Exchange (formerly called DoubleClick Ad Exchange" or "AdX"), Google Ads (formerly called "Google AdWords" or "AdWords"), Display & Video 360 ("DV360"), DoubleClick Bid Manager ("DBM") (also known as "Google Bid Manager"), Campaign Manager, DoubleClick Campaign Manager ("DCM"), Google Display Network ("GDN"), Google Ad Manager ("GAM"), DoubleClick for Publishers ("DFP"), Google AdSense (also known as "AdSense for Content" and "AFC"), DoubleClick for Advertisers ("DFA"), Google Analytics, Google AdMob, Search Ads 360 ("SA360"), Google Search Network, and any other product or service, however named, that You provide, have provided, or will provide for the sale or intermediation of Digital Advertising, including all predecessors and successors of such Ad Tech Products.

8. "Advertiser" shall mean anyone who buys, bids, or otherwise attempts to buy Ad Inventory on a third-party webpage or mobile application to serve ads to Users who visit a third-party webpage or mobile application.

9. "Algorithm" shall mean any process, set of rules, source code, or white paper describing or concerning the operation of Your Ad Tech Products or search engine.

10. "Analysis" shall mean any analyses, evaluations, or interpretations of Your Metrics, financial performance, expenses, or revenues. It also includes any analyses, evaluations, or

interpretations of the Metrics, financial performance, expenses, or revenues of third parties, such as Advertisers, Competitors, and Publishers.

11. "API" shall mean application programming interface.

12. "Attribution Model" shall mean the rule or rules that determine how a purchase is credited or attributed to an ad.

13. "Authorized Buyer" shall mean a buyer participating in Your Authorized Buyers program. *See* https://support.google.com/authorizedbuyers/answer/6138000?hl=en.[2]

14. "Bernanke" refers to Project Bernanke, including Bell, Global Bernanke, and any other variations, revisions, and/or versions.

15. "Behavioral Data" shall mean all types of data collected regarding user preferences, statuses, and behaviors, that is used by Google in its Ad Tech Products regardless of whether it is acquired directly from the User ("First-Party Data") or indirectly ("Second-Party Data" or "Third-Party Data"). Behavioral Data includes personal information including but not limited to demographic information, device identification, browser identification, location information, browsing history, and session length.

16. "Bid Request" shall mean an electronic message containing (directly or indirectly) information about the context of a piece of Ad Inventory (page content, URL, etc.) and the User (*e.g.*, cookie data) that can be used to solicit bids to purchase an Ad Impression, irrespective of whether the message or its contents has been modified for transmission to an Advertiser.

17. "Bid Response" shall mean an electronic message generated in response to a Bid Request containing (directly or indirectly) a bid price and various pieces of information concerning proposed advertising content to fill an Ad Impression identified in the corresponding Bid Request.

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[2] All web address hyperlinks that appear in these Requests were last visited on January 27, 2023.

18. "Clone" shall mean an exact copy of a document, Source Code Repository, or wiki, including all commits, comments, versions, and revision history, if any. *See* https://help.github.com/en/github/getting-started-with-github/github-glossary#clone. Please note the instruction above, which requires any responsive dynamic material (*e.g.*, a wiki or repository) to be produced in electronic format as a Clone of such material, including all comments, versions, commits, revision history, and material from any associated information tracking systems, including feature requests, bug reports, issues, sprints, tasks, user stories, project management, and trouble tickets.

19. The term "communication" shall include, without limitation, every manner or means of statement, utterance, notation, disclaimer, transfer, or exchange of information of any nature whatsoever, by or to whomever, whether oral or written or whether face-to-face, by telephone, mail, email ,electronic mail, personal delivery, or otherwise, including but not limited to, letters, correspondence, conversations, memoranda, dialogue, discussions, meetings, interviews, consultations, agreements, contracts, understandings, meeting of the minds, licenses, settlements, deals, and assignments.

20. The term "all communications" shall mean any and all communications that might reasonably be located through a search of all locations likely to contain such communications.

21. "Competitors" shall mean any entity that offers any products or services that competes or has competed with Your Ad Tech Products or Ad Tech Services.

22. "Core Algorithm Update" includes "core updates" as described by You at https://developers.google.com/search/updates/core-updates, and all other algorithmic changes and updates You employ to implement Your Core Algorithm Updates.

23. "Core Web Vitals" shall have the same meaning You provide at https://support.google.com/webmasters/answer/9205520?hl=en.

24. "Cost-Per-Click" or "CPC" shall mean that method of payment by which Advertisers pay a certain amount of money each time a User clicks on ad space filled by that Advertiser.

25. "Cost-Per-Mille" or "CPM" shall mean that method of payment by which Advertisers pay, or Publishers receive, a certain amount of money for every thousand Ad Impressions that occur in a given ad space.

26. "DA" refers to Dynamic Allocation, including any variations, revisions, and/or versions thereof.

27. The term "Date" shall mean the exact day, month, and year, if ascertainable, and if the exact day, month, and year are not ascertainable, then the best approximation thereof.

28. "Demand-Side Products" shall mean Your Ad Tech Products that facilitate the purchase of Ad Inventory, including AdWords, Google Ads, DoubleClick for Advertisers, Google Display Network, DoubleClick Campaign Manager, Google Campaign Manager, DoubleClick Bid Manager, DV360, Google Analytics, Analytics 360, and Google Audience Center.

29. "Direct Sales" shall mean Ad Inventory that is sold by a Publisher without the use of open programmatic auctions, but including programmatic guaranteed line items managed by the Publisher, directly to Advertisers.

30. "Digital Advertising" shall mean advertising inventory filled by way of the internet, as opposed to out-of-home, broadcast television, or print, including video Digital Advertising, display (desktop and mobile) Digital Advertising, search Digital Advertising, in-app Digital Advertising, native Digital Advertising, rich media Digital Advertising and any other advertising categorized as Digital Advertising by You in Your ordinary course of business.

31. The term "Document" or "document" shall be synonymous in meaning and equal in scope to the usage of the term "documents or electronically stored information" in F.R.C.P. 34(a)(1)(A). As used herein, the term "document" means all written, printed, recorded, reproduced, stored, or computer-generated words, data, or information, including any writing or recording of any type or description, whether made by mechanical, electronic, or manual (e.g., by hand) means, and whether or not produced or created by Plaintiff, Defendants, or a third-party, including, without limitation, all letters, email, electronic mail, communications, correspondence, telegrams, tickets, coupons, certificates, reports, financial statements, memoranda, records, minutes, notices and notes of meetings, telephone, and personal conversations and conferences, interoffice, microfilm, microfiche, tape recordings, videotapes, photographs, bulletins, studies, plans, analyses, notices, computer records, runs, programs, software, books, pamphlets, illustrations, lists, forecasts, brochures, periodicals, charts, graphs, indices, bills, statements, files, agreements, contracts, subcontracts, understandings, meeting of the minds, licenses, settlements, deals, assignments, completed and incomplete forms, schedules, work sheets, data compilations, policies, training manuals, operator's manuals, user manuals, calendars, diaries, test results, reports and notebooks, opinions or reports of consultants, and any other written, printed, typed, recorded, or graphic matter, of any nature, however produced or reproduced, including drafts, amendments, revisions, modifications, copies, duplicates, and reproductions thereto, all code base(s) necessary to access and read the foregoing, and all handwritten notes or notations thereon in whatever form; provided that the term "documents" includes "communications" (as defined above), to the extent they are written, printed, recorded, reproduced, stored, or computer-generated words, data, or information. For the avoidance of doubt, the term "documents" also includes all words, data, or information that is recorded, stored, or otherwise recorded in a computer or other storage, disk, device, or media

(whether hosted locally or remotely) and can be printed on paper or tape, including web pages, web sites, social media applications, and drafts of documents stored in a computer application (e.g., applications for word processing, document management, spreadsheet creation and management, computer assisted drafting, etc.).

32. The term "all documents" shall mean any and all documents that might reasonably be located through a search of all locations likely to contain such documents.

33. "DRS" refers to Dynamic Revenue Share, including any variations, revisions, and/or versions thereof.

34. "EDA" refers to Enhanced Dynamic Allocation, including any variations, revisions, and/or versions thereof.

35. "Elmo" refers to Project Elmo, including any variations, revisions, and/or versions thereof.

36. "First Look" shall mean the feature of Google Ad Manager described on https://support.google.com/admanager/topic/9242064, including any equivalent features in other Google Ad Tech Products.

37. "GDN Referrer Data" shall mean the "raw GDN Referrer Data" described in *United States v. Google LLC*, No. 20-cv-03010 (D.D.C.), ECF No. 352, at 26-28.

38. "Includes" shall mean "includes, but not limited to"; and "including" shall mean "including without limitation."

39. "Metric" shall mean any measures of quantitative assessment that may be used for analyzing, evaluating, or interpreting Your business, Your budgets, Your financial performance, Your revenues, or Your Projections, including the following: cost per mille (CPM), revenue per mille (RPM), cost per click (CPC) cost per impression, average advertiser yield, monthly active users (MAU), revenue split, total advertising revenue, take rate, transaction fees, total ad

impressions, number of impressions, and/or daily active users (DAU). Metric also includes any measures of quantitative assessment that may be used for analyzing, evaluating, or interpreting the business, budgets, financial performance, revenues, or Projections relating to third parties (*e.g.*, Advertisers, Competitors, and Publishers), including the following: cost per mille (CPM), revenue per mille (RPM), cost per click (CPC) cost per impression, average advertiser yield, monthly active users (MAU), revenue split, total advertising revenue, take rate, transaction fees, total ad impressions, number of impressions, and/or daily active users (DAU).

40. "Policy   Issues"   shall   have   the   same   meaning   You   provide   at https://support.google.com/admanager/answer/11117554?hl=en&ref_topic=11121694.

41. "Poirot" refers to Project Poirot, including any variations, revisions, and/or versions thereof.

42. "Projections" shall mean any forecasts or evaluations of Your or a third parties' (*e.g.*, Advertisers, Competitors, Publishers) future or predicted Metrics, financial performance, expenses, or revenues.

43. "Publisher" shall mean anyone who serves content on the internet that is monetized by selling Ad Inventory to Advertisers.

44. "Real-Time Bidding" or "RTB" shall mean that process by which Advertisers submit bids for Ad Impressions in real-time Ad Auctions.

45. "RPM" or "Revenue Per Mille" shall mean "the estimated earnings you'd accrue for every 1000 impressions you receive." https://support.google.com/adsense/answer/190515?hl=en

46. "RPO" refers to Reserve Price Optimization, including first-price and second-price RPO and any variations, revisions, and/or versions thereof.

47. "Source Code" shall mean human-readable instructions written in a language that can be executed by a computer. The term "Source Code" includes instructions that can be understood by an interpreter as well as instructions that must first be compiled or assembled prior to execution by a computer. The term "Source Code" further includes any associated files, including comments, read me files, and change logs, without regard to whether these files can be executed.

48. "Source Code Computer" means computer(s) made available by You for inspection and review in this Action, either in person and/or remotely, and containing any Source Code produced by You in this Action.

49. "Source Code Repository" shall mean a file archive, web hosting facility, or platform for the storage, development, and version control of Source Code, including associated documentation, web pages, and other works. This term includes GitHub, SVN, Google Code, and SourceForge. This term also includes all associated branches, forks, and submodules of each said repository.

50. The "States" shall mean Plaintiffs the State of Texas, State of Arkansas, State of Idaho, State of Indiana, Commonwealth of Kentucky, State of Mississippi, State of Missouri, State of North Dakota, State of South Dakota, State of Utah, State of Alaska, State of Florida, State of Nevada, Commonwealth of Puerto Rico, State of Montana, State of Louisiana, and State of South Carolina.

51. "Third-Party Publisher" refers to any publisher other than Google.

52. "Third-Party Advertiser" refers to any advertiser other than Google.

53. "Third-Party Exchange" refers to any Ad Exchange other than those operated by Google.

54. "UPR" refers to Google's Unified Pricing Rules and/or Uniform Pricing Rules, including any variations, revisions, and/or versions thereof.

55. "User" shall mean the person who is viewing a web page and to whom an Ad Impression may be displayed through use of Your Ad Tech Products and/or Ad Tech Services.

56. "You", "Your", "Alphabet", or "Google" shall mean Defendants Google LLC, Alphabet Inc., and YouTube, LLC ("Defendants") and their past and present officers, employees, agents and representatives, parents and predecessors, divisions, subsidiaries, affiliates, partnerships and joint ventures. The terms "subsidiary," "affiliate," and "joint venture" refer to any firm in which there is total or partial ownership of twenty-five percent or more or total or partial control between the company and any other Person or entity.

57. The terms "and" and "or" and "and/or" shall be construed conjunctively or disjunctively as necessary to bring within the scope of the deposition topics all information that might otherwise be construed to be outside of its scope.

58. The terms "any" or "all" shall mean any and all and encompasses "any," "all," and "any and all."

59. The terms "each" and "any" shall mean each and every, and should be understood to encompass "all"; "or" should be understood to include and encompass "and"; and "and" should be understood to include and encompass "or."

60. The term "identify," when used with reference to:

    a.   an individual, shall mean to state the individual's full name, present or last known employer, present or last known job title or business description, present or last known residence addresses and telephone number, and present or last known business addresses and telephone number;

b.   a Person that is not an individual, shall mean to state the full name and address of the Person and the names and positions of the individual or individuals connected with such Person who have knowledge of the information requested;

c.   a document, shall mean to state the type of document (letter, memorandum, etc.), its date, author(s) or originator(s), addressee(s), all individuals who received or reviewed copies of the document, the identity of Persons known or presumed by you to have present possession, custody or control thereof, and a brief description of the subject matter and present location;

d.   an event, or in connection with events, shall mean to describe the event, the date of the event, the location of the event and the individual and organizational entities participating in the event.

61. The term "Person" shall mean any individual (*i.e.*, natural person), entity, firm, association, partnership, corporation, group, organization, unincorporated association, joint venture, sole proprietorships, or any organization of the same.

62. The terms "relating to," "related to," "relate to" or "regarding" shall mean identifying, showing, dealing with, embodying, pertaining, concerning, regarding, involving, indicating, constituting, commenting upon, summarizing, analyzing, interpreting, detailing, outlining, defining, comprising, reflecting, discussing, disclosing, evidencing, mentioning, referring to, consisting of, responding to, or having any logical or factual connection whatever with the subject matter in question.

63. Capitalized terms not defined herein shall have the definitions set forth in the most recent complaints (and any subsequently filed complaints or amended complaints) in *In re: Google Digital Advertising Antitrust Litigation*, 1:21-md-03010-PKC, ECF Nos. 195 (States Complaint),

399 (Advertiser Class Complaint), 400 (Daily Mail Complaint), 401 (Direct Action Newspapers Complaint) and 408 (Publisher Class Complaint).

64. Any reference to Your Ad Tech Products or Your Ad Tech Auction Mechanics, individually or collectively, also shall include any successor or predecessor Ad Tech Products or Ad Tech Auction Mechanics having the same or similar functionality.